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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/506,736

05/09/2005

Jae-Woo Ha

SUN-100

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SALIWANCHIK LLOYD & SALIWANCHIK

A PROFESSIONAL ASSOCIATION

PO BOX 142950

GAINESVILLE, FL 32614-2950

EXAMINER

BROWN, VERNAL U

ART UNIT

PAPER NUMBER

2612

MAIL DATE

DELIVERY MODE

12/26/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/506,736	Applicant(s) HA, JAE-WOO	
	Examiner Vernal U. Brown	Art Unit 2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 5-23 is/are rejected.
- 7) ☒ Claim(s) 3 and 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) ✓
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08) ✓
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

The application of Jae-Woo HA filed 5/09/2005 for Apparatus for Opening /Closing the Door has been examined. Claims 1-23 are pending.

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The current abstract uses the phrase "The present invention". This is implied and should be avoided.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 8, 12-14, 16, and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Frovlov et al. US Patent 5608298.

Regarding claim 1, Frovlov et al. teaches and apparatus for opening/closing a door comprising: sensing means (42) for sensing a password inputted by a user and outputting a sensing signal to the microprocessor (col. 3 lines 51-54, col. 4 lines 59-62);

controlling means (66) for determining validity of the password based on the sensing signal and outputting a control signal according to a determining result (col. 4 lines 59-65);

door opening means provided by the handle (col. 3 lines 5-10) for opening the door according to the control signal transmitted to unlock/lock the door (col. 4 lines 63-67).

Regarding claim 8, Frovlov et al. teaches switches (74) use as a means for inputting the password to be set (col. 4 line 67-col. 5 line 6) and door opening means provided by the handle (col. 3 lines 5-10) for opening the door according to the control signal transmitted to unlock/lock the door (col. 4 lines 63-67).

Regarding claim 12, Frovlov et al. teaches a door opening/closing driving section for driving a motor according to the control signal outputted from a controlling means for driving a motor (col. 4 lines 64-67) and teaches rotating a link member to the driving shaft (col. 4 lines 12-22).

Regarding claims 13-14, Frovlov et al. teaches determining the validity of the password and outputting a control signal according to the determine result and opening the door according to the control signal (col. 4 lines 59-65, col. 4 lines 63-67) and teaches the use of a key pad to enter the password (col. 6 line 14-16). The validity of the password is determines base on the arrangement order of the keys pressed.

Regarding claim 16, Frovlov et al. teaches sensing a password inputted by a user and outputting a sensing signal (col. 3 lines 51-54, col. 4 lines 59-62);

determining the validity of the password and outputting a control signal according to the determine result and unlocking the door according to the control signal (col. 4 lines 59-65, col. 4 lines 63-67). Frovlov teaches a door opening/closing means provided by the handle for opening the door after the control signal unlock the door (col. 3 lines 5-10).

Regarding claim 23, Frovlov et al. teaches a door opening/closing driving section for driving a motor according to the control signal outputted from a controlling means for driving a motor (col. 4 lines 64-67) and teaches rotating a link member to the driving shaft (col. 4 lines 12-22).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frovlov et al. US Patent 5608298 in view of Salem US Patent 4197524.

Regarding claims 2 and 5, Frovlov et al. teaches determining validity of the password based on the sensing signal and outputting a control signal according to a determining result (col. 4 lines 59-65) but is not explicit in teaching a signal processing means for processing the sensing

signal using the key signal. Salem in an analogous art teaches a signal processing means (20) processing the sensing signal (22) using the key signal (30) (col. 4 lines 12-27).

It would have been obvious to one of ordinary skill in the art to modify the system of Frovlov et al. as disclosed by Salem because the signal processor provides the means for detecting the input sequence for operating the electronic lock for opening/closing the door.

Claims 6 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frovlov et al. US Patent 5608298 in view of Frovlov et al. US Patent 6876293.

Regarding claim 6, Frovlov et al. (US Patent 5608298) teaches door opening/closing means for ascertaining whether or not the password is set normally by generating a signal to drive the motor of the lock when a valid passcode is detected (col. 4 lines 59-67) but is silent on teaching password input start means for releasing a sleep mode before the user input the password. Frovlov et al. (US Patent 6876293) teaches each of the pushbutton provides an input to the wake up circuitry and the microprocessor transition from the sleep mode when any of the push button is pressed (col. 5 lines 8-18).

It would have been obvious to one of ordinary skill in the art to have a password input start means for releasing a sleep mode before the user input the password in Frovlov et al. (US Patent 5608298) as disclosed by Frovlov et al. (US Patent 6876293) because this provides a power saving means and extend the life of the battery.

Regarding claim 17, Frovlov et al. (US Patent 5608298) teaches door opening/closing means for ascertaining whether or not the password is set normally by generating a signal to drive the motor of the lock when a valid passcode is detected (col. 4 lines 59-67) but is silent on teaching password input start means for releasing a sleep mode before the user input the

password. Frovlov et al. (US Patent 6876293) teaches each of the pushbutton provides an input to the wake up circuitry and the microprocessor transition from the sleep mode when any of the push button is pressed (col. 5 lines 8-18) and teaches the use of a plurality of touch sensors for inputting the password (col. 3 lines 59-57).

It would have been obvious to one of ordinary skill in the art to have a password input start means for releasing a sleep mode before the user input the password in Frovlov et al. (US Patent 5608298) as disclosed by Frovlov et al. (US Patent 6876293) because this provides a power saving means and extend the life of the battery.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Frovlov et al. US Patent 5608298 in view of Murrer et al. US Patent 4967305.

Regarding claim 7, Frovlov et al. (US Patent 5608298) teaches providing visual indication of the password entered correctly (col. 4 lines 63-66) and teaches storage means for storing the set password used to determine the password is set and inputted correctly (col. 5 lines 3-5) but is silent on teaching a sound output means for reporting that the password is inputted and set normally. Murrer et al. in an analogous art teaches the use of a sound feedback means as an alternative to a visual indication (col. 1 lines 36-38).

It would have been obvious to one of ordinary skill in the art to have a sound output means for reporting that the password is inputted and set normally in Frovlov et al. because the sound means is an alternative to visual feedback means of Frovlov et al.

Claims 9 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frovlov et al. US Patent 5608298 in view of Dawson et al. US Patent 5709114.

Regarding claims 9 and 15, Frovlov et al. teaches sensing means (42) for sensing a password inputted by a user (col. 3 lines 51-54, col. 4 lines 59-62) but is silent on teaching a plurality of touch sensors for inputting the password. Dawson in an analogous art teaches a plurality of touch sensors provided by touchpad (10) for inputting the password (col. 3 lines 42-44) and a touch detection section for sensing a touch of the user and outputting a corresponding sensing signal (col. 5 lines 43-50).

It would have been obvious to one of ordinary skill in the art to have a plurality of touch sensors for sensing a touch of user in Frovlov et al. as disclosed by Dawson et al. because the touch sensors represents an alternative input means to the keypad of Frovlov.

Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frovlov et al. US Patent 5608298 in view of Dawson et al. US Patent 5709114 and further in view of Nahata et al. US Patent Application Publication 20010052839.

Regarding claims 10-11, Frovlov in view of Dawson teaches the use of touch sensors to enter the user's to detect the user's password (see response to claim 9) but is silent on teaching the sensors become conductive through a medium of human being and the touch sensors uses the capacitance of the human body. Nahata et al. in an art related invention in the same field of endeavor of electronic lock teaches touch sensors become conductive through a medium of human being and the touch sensors uses the capacitance of the human body (paragraph 021).

It would have been obvious to one of ordinary skill in the art to modify the system of Frovlov in view of Dawson as disclosed by Nahata et al. because capacitive sensors are considered as touch sensors.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Frovlov et al. US Patent 5608298 in view of Frovlov et al. US Patent 6876293 and further in view of Nahata et al. US Patent Application Publication 20010052839.

Regarding claim 18, Frovlov is silent on teaching the touch sensors become conductive through a medium of human being and the touch sensors uses the capacitance of the human body. Nahata et al. in an art related invention in the same field of endeavor of electronic lock teaches touch sensors become conductive through a medium of human being and the touch sensors uses the capacitance of the human body (paragraph 021).

It would have been obvious to one of ordinary skill in the art to modify the system of Frovlov (US Patent 5608298) in view of (Frovlov et al. US Patent 6876293) as disclosed by Nahata et al. because capacitive sensors are considered as touch sensors.

Claims 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frovlov et al. US Patent 5608298 in view of Han et al. US Patent 6298147.

Regarding claims 19-22, Frovlov et al. teaches sensing means (42) for sensing a password inputted by a user (col. 3 lines 51-54, col. 4 lines 59-62) and teaches determining the validity of the password and outputting a control signal according to the determine result and opening the door according to the control signal (col. 4 lines 59-65, col. 4 lines 63-67) but is silent on teaching the sensing signal is generated when the user touches the touch sensor. Han et al. in an analogous art teaches generating sensing signal when the user touches the touchpad (col. 6 lines 20-23) and teaches using a signature as the input password (col. 6 lines 14-19). The input of the signature required that the password must be input in a define order in order for the signature to be recognized.

It would have been obvious to one of ordinary skill in the art to modify the system of Frovlov as disclosed by Han et al. because the use of the touchpad use as an input device allows the electronic lock to be more versatile by allowing various characters to be used as the identification pattern

Allowable Subject Matter

Claims 3-4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 3-4, the prior art of record fail to teach or suggests the signal processing means comprises a key signal section for combining the impulse signal and another impulse signal and outputting a combined signal and a logic operation section for performing logic operation using the combined key signal.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vernal U. Brown whose telephone number is 571-272-3060. The examiner can normally be reached on 8:30-7:00 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Zimmerman can be reached on 571-272-3059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Vernal Brown
December 5, 2007



BRIAN ZIMMERMAN
SUPERVISORY PATENT EXAMINER